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13. ABSTRACT *(Maximum 200 words)*

THE PRIMARY OBJECTIVE OF THIS INTERIM RESPONSE ACTION IS TO PREVENT THE POTENTIAL SPREAD OF CONTAMINATION VIA THE SANITARY SEWER SYSTEM. THE SOURCES OF THIS POTENTIAL CONTAMINATION ARE 1) CONTAMINATED GROUND WATER THAT INFILTRATES THE SYSTEM AND 2) CONTAMINATED SURFACE WATER RUNOFF THAT ENTERS THE SYSTEM THROUGH EXPOSED CONNECTIONS.

THIS PROPOSED DECISION DOCUMENT PROVIDES SUMMARIES OF THE FOLLOWING:

1. ALTERNATIVES CONSIDERED
2. SIGNIFICANT EVENTS LEADING TO THE INITIATION OF THE IRA
3. THE IRA PROJECT
4. THE APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS, STANDARDS, CRITERIA, OR LIMITATIONS (ARAR'S) ASSOCIATED WITH THE PROGRAM.

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PROPOSED DECISION DOCUMENT FOR THE SANITARY SEWER SYSTEM INTERM RESPONSE ACTION AT ROCKY MOUNTAIN ARSENAL

JANUARY 1989

Prepared for:

U.S. Army Program Manager's Office for
Rocky Mountain Arsenal Contamination Cleanup

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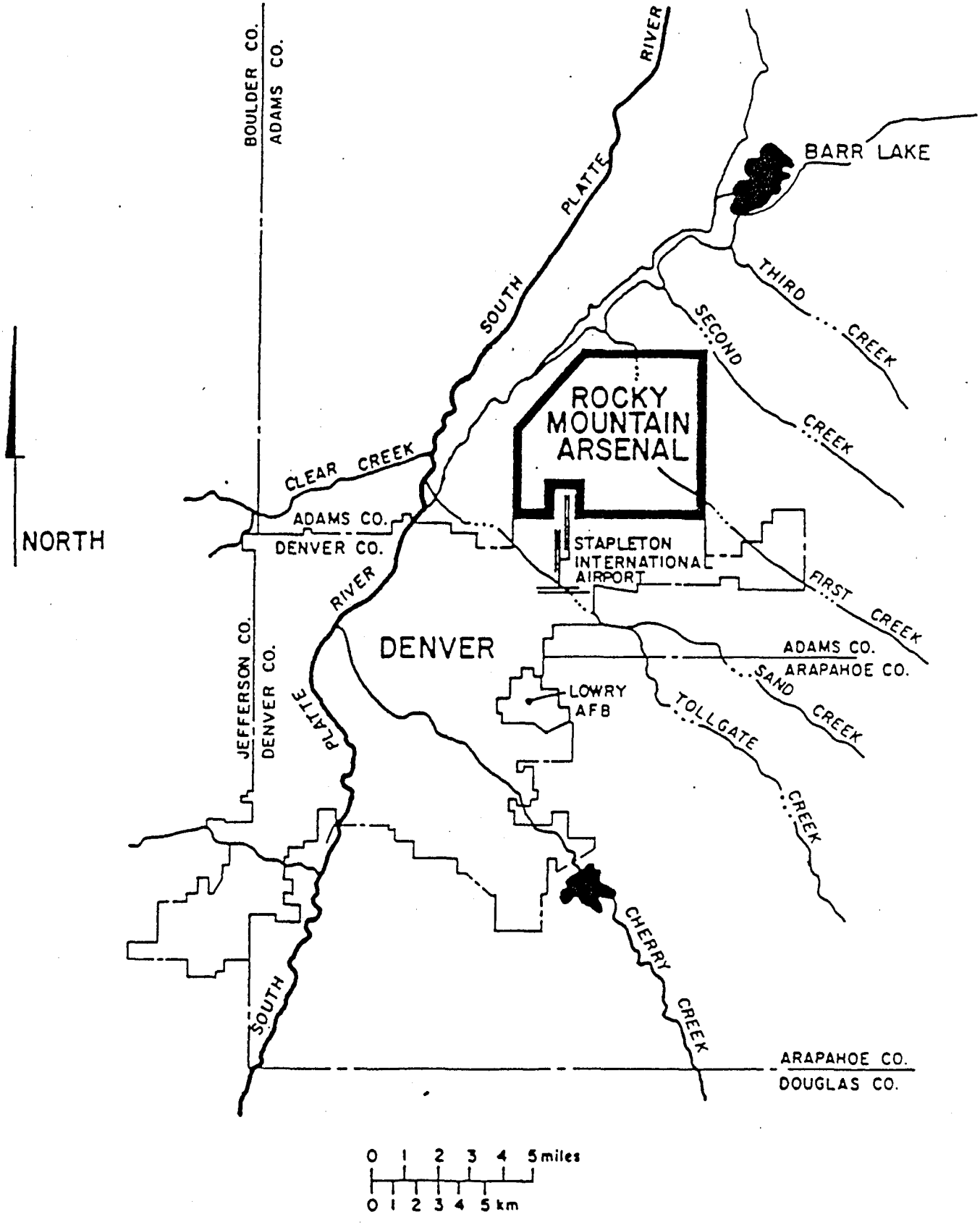


Figure 1. Location Map-Rocky Mountain Arsenal

(Source: MKE, 1988)

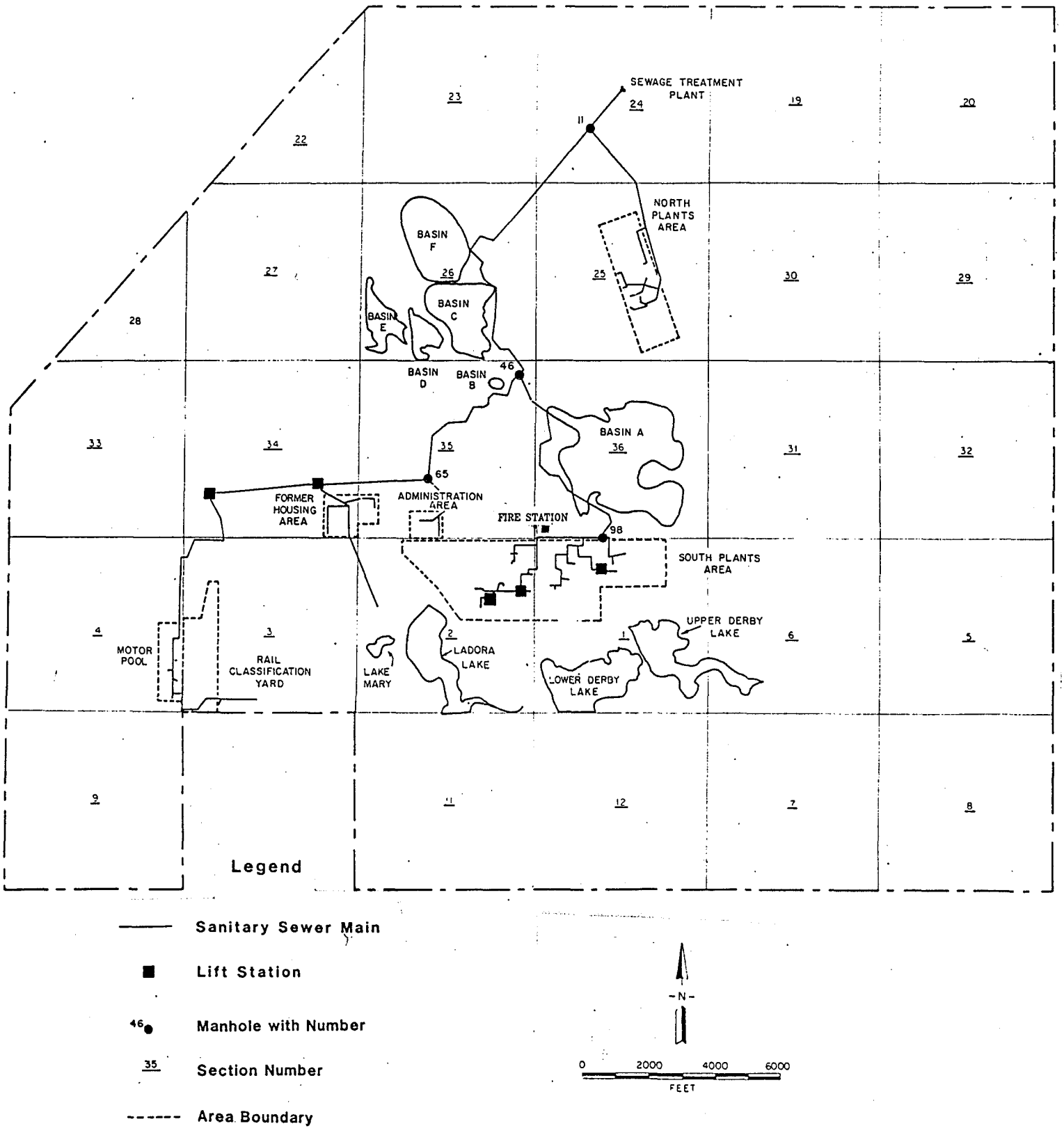


Figure 2. Location Map-Sanitary Sewer System

Investigation of the interceptor line (Black & Veatch, 1979; 1980) concluded that the line was generally in poor condition, with considerable infiltration and exfiltration occurring in Section 36. Further studies concluded that contamination has entered the interceptor line with infiltrating groundwater (USAEHA, 1985). Portions of the line are currently very near the groundwater table. Once contamination has entered the system it can be transported along the system to other downstream areas.

In the North Plants area, investigations showed the groundwater in this area to be about 50 feet below the sewer in the Railyard area and about 30 feet below the sewer in the Administration area, so that infiltration of contaminated groundwater is not a concern (Black & Veatch, 1979; 1980). Therefore, this portion of the sewer system is not acting as a transport mechanism for contamination and will not be addressed in this IRA.

2.1 HISTORY OF THE SANITARY SEWER INTERIM RESPONSE ACTION

On February 1, 1988, a proposed Consent Decree was lodged in the case of U.S. v. Shell Oil Company with the U.S. District Court in Denver, Colorado. This Decree was commented on by the pubic and a modified proposed Consent Decree was lodged with the Court, after review of comments, on June 7, 1988. The Army and Shell Oil Company agreed to share certain costs of the cleanup that is being developed and will be performed by the Army under the oversight of the EPA, with numerous opportunities for comment by the State of Colorado. The long term cleanup is a complex task that will take several years to complete. To facilitate more immediate remediation activities, the Consent Decree specifies a number of interim actions to alleviate the most urgent problems. One of these interim actions is for remediation of the Sanitary Sewer System.

3.0 INTERIM RESPONSE ACTION OBJECTIVE

The primary objective of this IRA is to prevent the potential spread of contamination via the sanitary sewer system. The sources of this potential contamination are contaminated groundwater that infiltrates the system and contaminated surface water runoff that enters the system through exposed connections. Areas of the sanitary sewer where infiltration has occurred and is likely to continue are in the South Plants area and along the interceptor line between Manholes 98 and 46. Areas of the sewer where contaminated surface water runoff has entered the system are in the North Plants area. Remediation of these segments will prevent the entry of contamination into the system and thereby minimize possible contaminant transport through the system.

Selection of the most effective remediation alternative was based on the following specific criteria: (1) timeliness; (2) effectiveness; (3) demonstrated performance; (4) availability; and (5) cost.

This decision document provides a summary of the alternatives considered, a chronology of the significant events leading to the initiation of the IRA, a summary of the IRA project, and a summary of the Applicable or Relevant and Appropriate Requirements, standards, criteria, or limitations (ARARs) associated with the program.

4.0 INTERIM RESPONSE ACTION ALTERNATIVES

Sewer system remediation alternatives were examined in the September, 1988 Final Report: Sewer System Remediation-Interim Response Action Alternatives Assessment (Ebasco Services, Incorporated, 1988) prepared for the Program Manager for the RMA Contamination Cleanup. The following alternatives were considered for the North Plants area, the South Plants area, and the interceptor line:

- Removal
- Abandonment in place
- Rehabilitation
- Replacement

These alternatives could be implemented on the entire system or could apply to select segments of the system. More than one general alternative may be used to meet the IRA objective.

REMOVAL

Segments of the sewer system considered to be primary sources of infiltration and inflow, or potential contributors to the transport of contamination, would be excavated, removed, and transported to a temporary storage facility to be constructed on RMA. The excavated pipeline and soil would be remediated during the RMA Remedial Action. This alternative is viable only for segments of the sewer that can be closed permanently.

ABANDONMENT IN PLACE

The IRA priority segments of the sewer line would be abandoned in place. Strategic manholes would be filled with concrete and, under certain conditions, cut-off walls installed in the sewer trenches, to prevent migration of contaminated water through the sewer system or trench. The entire line could be grouted, but this level of remediation is not necessary for an interim response activity. This alternative is only viable if the segment can be closed.

REHABILITATION

The IRA priority segments of the sewer system would be rehabilitated in place by either slip-lining or by in-situ forming a new pipe inside the existing system. This option applies to those parts of the sewer that are still in use. During rehabilitation, wastewater in the line will either be pumped to the nearest operational manhole or trucked directly to the sewage treatment plant.

REPLACEMENT

The priority segments of the sewer system would be excavated, removed, and transported to a temporary storage facility to be constructed on RMA. A new system would be installed with basically the same alignment and purpose as

the removed segments. The replacement line would be either a below ground gravity line like the current sewer system, or an above ground force main which would require insulation and heating to prevent freezing in the winter. This method applies to segments of the sewer that will remain in use. During replacement, wastewater in the line will either be pumped to the nearest operational manhole or trucked directly to the sewage treatment plant.

4.1 ALTERNATIVES FOR NORTH PLANTS

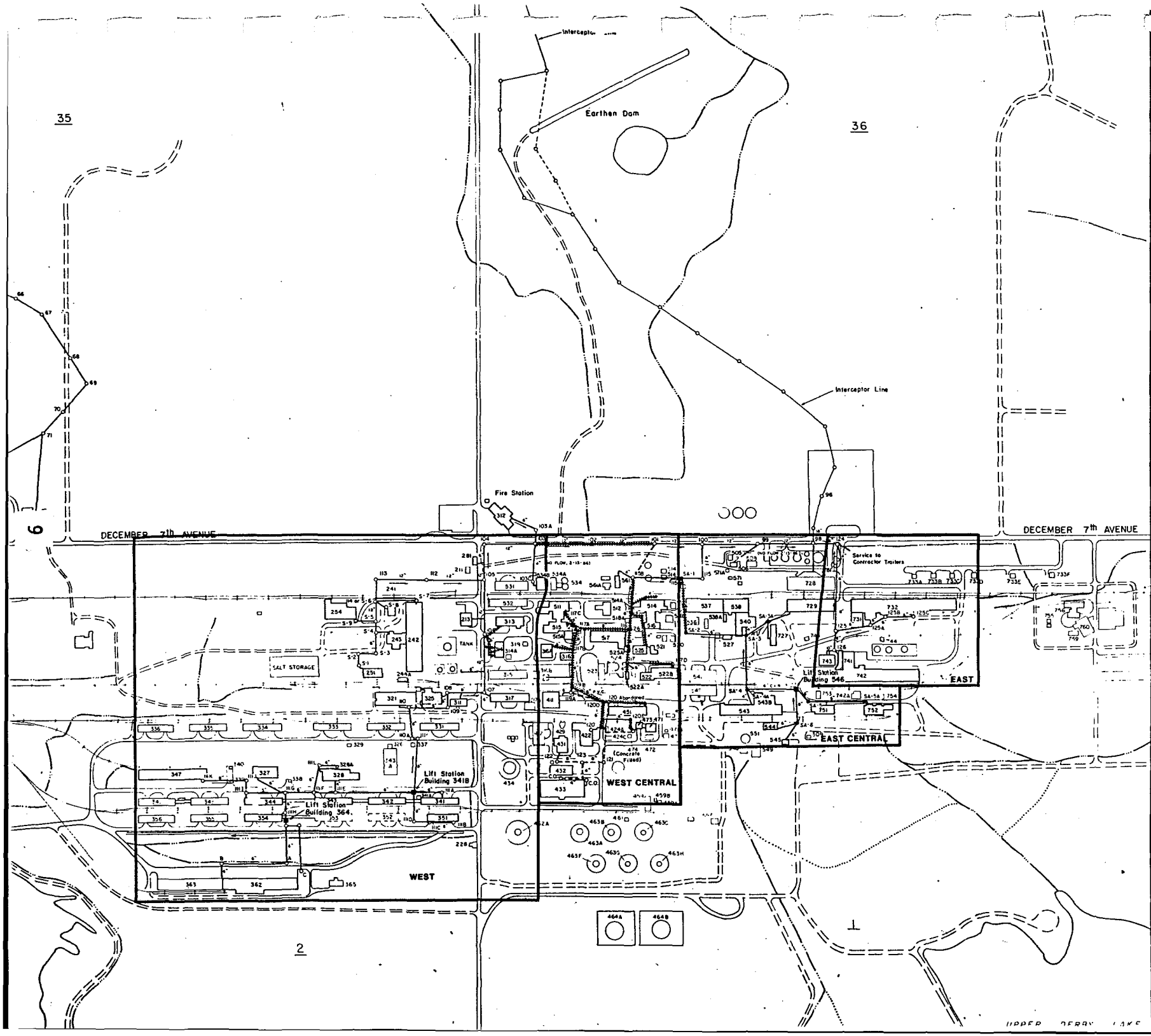
The sanitary sewer in North Plants continues to be used only to receive discharge from the Building 1727 sump IRA treatment system and from Bldg. 1710 (being used to provide temporary office space). Potential contamination from the 1727 sump liquid is removed by the treatment system prior to discharge in the sewer. Infiltration of potentially contaminated groundwater will not occur in this area as the water table is 10 to 20 ft below the sewer. The only pathway for contamination to enter the sewer is through the seven exposed sewer connections found by Black and Veatch, which may allow surface water runoff to enter the sewer. Any contamination contained in the runoff water could be transported along the pipe to other downstream areas. To prevent this, the exposed connections should be capped.

4.2 ALTERNATIVES FOR SOUTH PLANTS

Remediation alternatives for the priority segments of the sanitary sewer are contingent on the configuration of the South Plants complex. Actions are currently being taken to limit activities there, primarily by closing buildings and relocating activities out of the area. Sanitary waste handling facilities will be needed for buildings that are left in service.

The biggest factor influencing the configuration of the South Plants sewers is whether or not the RMA Laboratory, Buildings 743 and 741, will be relocated to the Administration area. (The sewer system configuration and building locations of the South Plants are shown in Plate 1). If the lab is moved, the new facility will include a laundry and a small waste treatment system, so that the current laundry and laboratory support buildings (313 and 314) can be closed. Numerous buildings and warehouses currently connected to the sewer could be relocated, operated without sewer service, or switched to septic tanks and drain fields. These buildings include 213, 316, 316A, 238, 341, 343, 344, 351, 354, 362, 543, 544, 728, 729, 731, 732, 751, and 752. Individual package treatment plants could be used in place of septic tanks, but are generally more costly to install and operate.

The boiler house (Buildings 321, 325, and 311) supplies central heat to the laboratory, the commissary (Building 362), RMA maintenance and utility buildings (331, 332, 543, 543B, 751, and 752), the laundry (313 and 314), the calibration laboratory (213), a contractor warehouse (728), and the South Plants Liquid Treatment Facility (SPLTF) tank (556). If the laboratory is relocated, the remaining heated buildings in South Plants could be closed with the exception of the commissary and the SPLTF tank. The boiler house could also be closed, and the commissary and SPLTF tank could be heated individually.


35
36
2
Earthen Dam
Interceptor Line
Fire Station
DECEMBER 7th AVENUE
DECEMBER 7th AVENUE
SALT STORAGE
TANK
Lift Station Building 546
Lift Station Building 3418
Lift Station Building 364
Service to Contractor Trailers
EAST
EAST CENTRAL
WEST CENTRAL
WEST
120 Abandoned
(Concrete Filled)
Building, Existing
Building, Removed
Road, Paved
Road, Unpaved
36 Section Number
Railroad
8" Sewer Main, with Size Arrow Indicates Direction of Flow
Sewer Main, Abandoned
Area where Infiltration may Occur
C.O. Cleanout
Brick Manhole, with Number
SA-1 Precast Manhole, with Number
Areas where Possible Contamination has entered the Sewer in the Past
Pumping Station
Stream or Ditch
Stream or Ditch, Abandoned
After: COE 1984, COE 1980a, COE 1980b, and MKE 1986.
ROCKY MOUNTAIN ARSENAL LOCATION
N
0
300
FEET
Prepared for:
Program Manager's Office for
Rocky Mountain Arsenal Cleanup
Aberdeen Proving Ground, Maryland
By: Ebasco Services Incorporated
PLATE I
Sanitary Sewer in South Plants
Rocky Mountain Arsenal, Task 37

Relocation of the RMA laboratory would allow virtually all of South Plants to close with the exception of the new decontamination facility. This facility is planned to be located approximately 150 ft southeast of the SPLTF tank and will empty into the tank before treatment. The wastewater will then either enter the sanitary sewer system at Building 540, adjacent to Manhole SA-3, or be transported through a new line to the Fire Station. At least one active line will be needed out of South Plants to service the treatment plant. The interceptor line could still be used for this purpose or a new line could be established from the Fire Station to the Administration area and connected to that part of the sanitary sewer.

If the RMA laboratory is not relocated, the boiler house and Buildings 313 and 314 will still be in use. Sanitary waste handling will be needed for all of these buildings, and the incentive for relocating support buildings and warehouses out of South Plants will be reduced. Plans are currently under way to relocate the contractor trailers to an area north of the Administration area, but plans for other relocations have not yet been initiated. The preferred alternatives for the various sewer branches of the South Plants are those in which the RMA laboratory is relocated.

4.3 ALTERNATIVES FOR INTERCEPTOR LINE

The interceptor line is in poor condition and has shown signs of infiltration in the segment between South Plants and the tie-in from the Railyard/Administration area (Manholes 98 to 46). If this part of the interceptor line is used in the future, it will need rehabilitation or replacement.

Another option is to close the segment of the line between Manholes 98 and 46 and direct flows in South Plants to the Fire Station (see Figure 2). A new line could then be installed from the Fire Station (in the southwest corner of Section 36) to the sanitary sewer in the Administration area. Lift stations and new piping in South Plants will be needed to transport sewage to the Fire Station if this option is chosen. The existing sewer along December 7th Avenue could then be closed since it flows to the east, toward the interceptor line, and would not be used. The preferred alternative for the Interceptor line is in place abandonment along with connection of the Fire Station into the Administration Area.

5.0 CHRONOLOGY OF EVENTS

The significant events leading to the decision to remediate priority portions of the sanitary sewer system as described in Section 6.0 are as follows:

Date	Event
December 1980	Completed Sanitary Sewerage System Repairs Phase II Rocky Mountain Arsenal (Black & Veatch). Sanitary Sewer System was found to be in poor condition in many places and subject to infiltration and exfiltration.
September 1983	Completed Selection of a Contamination Control Strategy for RMA (RMA CCPMT) Sanitary Sewer System was identified as a transport mechanism for contaminants from the Basin A/South Plants area to other areas of the Arsenal. Outlined options to address problem.
June 1987	State of Colorado, Shell Oil Company, U.S. EPA, and U.S. Army agreed that 13 Interim Response Actions (including remediation of certain priority portions of the sewer system) would be conducted.
August 1988	Completed Draft Final Sanitary Sewer System Remediation Interim Response Action Alternative Assessment Version 2.1 (Ebasco Services, Inc.). Identified priority segments and evaluated various alternatives based on technical feasibility, time to implement, and cost. Developed preliminary cost estimates for all alternatives.
September 9, 1988	Shell Oil Company commented on Draft Final Sanitary Sewer Remediation Interim Response Action Alternative Assessment.
September 12, 1988	State of Colorado commented on Draft Final Sanitary Sewer Remediation Interim Response Action Alternative Assessment.
September 12, 1988	U.S. EPA commented on Draft Final Sanitary Sewer Remediation Interim Response Action Alternative Assessment. Outlined preferred alternatives for priority sections of sewer system.
October 1988	Completed Final Sanitary Sewer Remediation Interim Response Action Alternative Assessment Version 3.2 (Ebasco Services, Inc.). Incorporated appropriate comments from the Organizations and State along with Army responses to comments.

6.0 SUMMARY OF THE IRA PROJECT

The Sanitary Sewer IRA will involve the following activities:

6.1 NORTH PLANTS

In the North Plants, seven exposed sewer connections found by Black and Veatch will be capped or plugged to prevent contaminated surface water runoff from entering the sanitary sewer and being transported to other areas of RMA. Groundwater in this area is from 10 to 20 feet below the sewer line, therefore infiltration of contaminated groundwater is not a concern.

6.2 SOUTH PLANTS

In the South Plants, the scope of the IRA will depend on which buildings are relocated or closed, and how soon those actions will take place. It can be speculated that all of South Plants will eventually be closed as part of the final remediation plan. If this is the case, any buildings closed prior to the implementation of the final plan will be consistent with that plan. Building closures are not a part of this IRA.

Relative costs for sewer system remediation were discussed in the Final Sewer System Remediation IRA Alternative Assessment. In general, based on relative costs for each remediation method, sewer lines needing rehabilitation should be in-situ formed rather than slip-lined. Above ground, insulated pipe should be used for lines needing replacement. Lines being closed would be abandoned in place and plugged at manholes rather than removed. Abandoning a line will require plugging an estimated one-third of the manholes to ensure that contaminant transport through the sewers is prevented.

With the RMA laboratory relocated out of the South Plants, many building and warehouse activities can also be relocated. The boiler house and its associated maintenance and utility buildings can be closed, and the entire west branch of the sewer can be closed.

The west-central branch of the sewer can be closed when Building 316 and 316A activities are relocated. As stated previously, this segment of the sewer is a prime source of potential contamination in the sewer system. Closure would minimize contamination entering the sewer here and traveling to other areas of RMA.

When the RMA maintenance and utility buildings 543, 751, and 752 are relocated, the part of the east-central branch of the sewer upstream of Manhole SA-3 could be closed. The entire east-central branch can be closed if a new line is constructed to transport the flow from the SPLTF.

Without the laboratory on the east branch of the sewer, there is no need to keep this sewer line in service. The only other active buildings on this line are 728, 729, 731, and 732, all of which could be easily relocated.

6.3 INTERCEPTOR LINE

The segment of the interceptor line between Manholes 98 and 46 (see Figure 2) will be closed and sewer flow will be directed to the Fire Station. A new line will be installed from the Fire Station to the sanitary sewer in the Administration area. Lift stations and new piping in South Plants will be required to transport sewage to the Fire Station. The existing sewer along December 7th Avenue will be closed. Abandoning the line will require plugging approximately five manholes to ensure than contaminant transport through the sewer is prevented.

7.0 IRA PROCESS

With respect to the Sanitary Sewer System Remediation, the IRA Process is as follows:

1. The Army prepared a draft final Sewer System Remediation IRA Alternatives Assessment in August, 1988 and submitted it to the Department of Interior (DOI), the State, and other organizations for review and comment. Comments were to be submitted within 30 days after receipt of the draft assessment. After the close of the comment period, and in consideration of the comments received, the Army prepared and transmitted a final assessment in September, 1988 to the DOI, the State, and other organizations.

2. The Army afforded the State, EPA, and Shell an opportunity to nominate any ARARs that they believed warranted initial consideration by the Army in connection with this IRA. No nominations were received.

3. This Proposed Decision Document for the Sanitary Sewer Remediation IRA is subject to a 30-day public comment period including a public meeting approximately two weeks into the comment period. This Proposed Decision Document is supported by an administrative record.

4. Promptly after close of the Proposed Decision Document comment period, the Army shall transmit to the DOI, the State, and other organizations a Draft Final Decision Document for the Sanitary Sewer Remediation IRA.

5. Within 20 days after issuance of the Draft Final Decision Document for the Sanitary Sewer Remediation IRA, an organization (including the State if it has agreed to be bound by the Dispute Resolution process, as required by the Consent Decree, or DOI under the circumstances set forth in the Consent Decree) may invoke Dispute Resolution.

6. After the close of the period for invoking Dispute Resolution (if Dispute Resolution is not invoked) or after the completion of Dispute Resolution (if invoked), the Army shall issue a final Decision Document for the Sanitary Sewer Remediation IRA with the supporting administrative record. Thereafter, the Decision Document will be subject to judicial review in accordance with Sections 113 and 121 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, 42 U.S.C. Sections 9613, 9621.

8.0 ARARs

8.1 ATTAINMENT OF ARARs

The interim action process reported to the court on June 5, 1987, in United States v. Shell Oil Co. provides that interim response actions (including this IRA for remediation of certain priority sections of the sanitary sewer system) shall, to the maximum extent practicable, attain applicable or relevant and appropriate Federal and State standards. A similar provision appears in Paragraph 9.7 of the proposed Consent Decree.

8.2 IDENTIFICATION AND SELECTION OF ARARs

By letter dated February 5, 1988, counsel for the Army requested that EPA, Shell, and the State of Colorado preliminarily identify in writing the potential ARARs that they believed to be pertinent to this IRA by March 4, 1988. No responses were received to that letter.

Proposed ARARs were provided as Section 9.0 of the Draft Final Alternatives Assessment for this IRA and reviewed by EPA, Shell and the State.

8.3 SELECTION OF ARARs AND DETERMINATION OF ARAR IMPACT

8.3.1 AMBIENT OR CHEMICAL-SPECIFIC ARARs

Ambient or chemical-specific requirements set health or risk-based concentration limits or ranges in various environmental media for specific hazardous substances, pollutants, or contaminants. Such ARARs either set protective cleanup levels for the chemicals of concern in the designated media or indicate an appropriate level of discharge. There are no chemical-specific standards which are considered either applicable or relevant and appropriate for this IRA.

Detailed information concerning the contamination found in the sanitary sewer is contained in the Final Contamination Assessment Reports completed during 1988 (RIC88126R07, RIC88256R04, RIC88196R06 and RIC88126R06). The action contemplated by this IRA does not involve a discharge of treated effluent or similar activity for which chemical-specific standards may be applicable or relevant and appropriate, unlike several other IRAs such as those involving groundwater treatment systems. Contamination remaining in the soil is appropriately considered in the final remedial action and subject to standards developed through the ongoing Endangerment Assessment, Exposure Assessment and Feasibility Study for the On-Post Operable Unit.

8.3.2 LOCATION-SPECIFIC ARARs

Location specific requirements set restrictions on activities depending on the characteristics of the site or the immediate environment. These requirements function like action-specific requirements. Alternative remedial actions may be restricted or precluded depending on the location or characteristics of the site and the requirements that apply to it.

Paragraphs 23.2(e) and (f) of the proposed Consent Decree provide that:

(e) Wildlife habitat(s) shall be preserved and managed as necesary to protect endangered species of wildlife to the extent required by the Endangered Species Act, 16 U.S.C. paragraph 1531 et seq, migratory birds to the extent required by the Migratory Bird Treaty Act, 16 U.S.C. paragraph 703 et seq, and bald eagles to the extent required by the Bald Eagle Protection Act, 16 U.S.C. paragraph 668 et seq.

(f) Other than as may be necessary in connection with a response action or as necessary to construct or operate a response action structure, there shall be no change permitted in the geophysical characteristics of the Arsenal that has a significant effect on the natural drainage of the Arsenal for floodplain management, recharge of groundwater, operation and maintenance of response action structures, and protection of wildlife habitat(s).

While these provisions are not ARARs, they must be complied with for purposes of this IRA. Based on where the sanitary sewer system which may be affected is located, as well as when the IRA will take place, the Army believes that this IRA will have no adverse impact on any endangered species or migratory birds, or on the protection of wildlife habitats, or on wetlands. However, coordination with U.S. Fish and Wildlife Service will be maintained during this IRA to avoid any such adverse impacts.

Moreover, the Army has determined that this IRA will not change the geophysical characteristics of RMA in a manner that will have significant effect on the natural drainage of RMA for floodplain management, recharge of groundwater and the operation and maintenance of response action structures.

8.3.3 PERFORMANCE, DESIGN, OR OTHER ACTION-SPECIFIC ARARs

Performance, design, or other action-specific requirements set controls or restrictions on particular kinds of activities related to the management of hazardous substances, pollutants, or contaminants. These action-specific requirements may specify particular performance levels (or a methodology for setting specific levels) for discharged or residual chemicals.

The following warrant consideration as ARARs in connection with the sanitary sewer system IRA:

8.3.3.1 AIR EMISSIONS

In the context of this IRA there is only a very remote chance of any release of volatile or semi-volatile emissions. If such a release did occur, it would only be intermittent and of very brief duration, because the activity-producing release would be stopped and modified appropriately if a significant air emission was detected. The Health and Safety Plan developed for this IRA will describe specific monitoring plans and work modification procedures.

In the event that air emissions are generated during sewer system remediation, the Army has reviewed all potential ambient or chemical-specific air emission requirements. The Army found that there are, at present, no national or State ambient quality standards currently applicable or relevant and appropriate to any of the volatile or semi-volatile chemicals which could be released during this remediation. Ambient Air Quality Standards apply to Air Quality Control Regions, areas significantly dissimilar to that involved in this IRA, which is much smaller than an AQCR.

The NESHAPS standards contained in 40 C.F.R. Part 6 were considered as potential ARARs. However, because these regulations apply to stationary sources of these pollutants, and were developed for emissions from manufacturing processes significantly dissimilar from the short term construction activity which will take place during this IRA, they were considered to be neither applicable nor relevant and appropriate to the operations of this IRA. This IRA does not contain any specific source category regulated by NESHAPS. The NESHAPS standards are developed for and intended for use with the specific sources regulated, rather than all sources of specific pollutants.

8.3.3.3 REGULATIONS PROTECTIVE TO WORKERS

With respect to the workers directly participating in this IRA, the worker protection requirements of Section 126 of the Superfund Amendments and Reauthorization Act of 1986 shall be met through compliance with the OSHA interim final rule that appears in 52 Fed. Reg. 45654 (1986). Although OSHA proposed a permanent final rule on August 10, 1987, 52 Fed. Reg. 29620, the comment period on this rule did not close until October 5, 1987. The Army will also follow Section 300.150 of the proposed NCP published at 53 Fed. Reg. 51394 (1988).

8.3.3.4 GENERAL CONSTRUCTION ACTIVITIES

The following performance, design or other action-specific State ARARs have been identified by the Army as relevant and appropriate to this portion of the IRA and are more stringent than any applicable or relevant and appropriate Federal standard, requirement, criterion or limitation:

(i) Colorado Air Pollution Control Commission Regulation No. 1, 5 CCR 100-3, Part III(D) (2) (b), "Construction Activities":

(a) Applicability - Attainment and Nonattainment Area

(b) General Requirement

Any owner or operator engaged in clearing or leveling of land or operator of land that has been cleared of greater than one (1) acre in nonattainment areas from which fugitive particulate emissions will be emitted shall be required to use all available and practical methods which are technologically feasible and economically reasonable in order to minimize such emissions in accordance with the requirements of Section III.D. of this regulation.

(c) Applicable Emission Limitation Guideline

Both the 20%-opacity and the no off-property transport emission limitation guidelines shall apply to construction activities; except with respect to sources or activities associated with construction for which there are separate requirements set forth in this regulation, the emission limitation guidelines there specified as applicable to such sources and activities shall be evaluated for compliance with the requirements of Section III.D. of this regulation.

(Cross Reference: Subsections e, and f, of Section III.D.2 of this regulation.)

(d) Control Measures and Operating Procedures

Control measures or operational procedures to be employed may include, but are not necessarily limited to, planting vegetation cover, providing synthetic cover, watering, chemical stabilization, furrows, compacting, minimizing disturbed area in the winter, wind breaks and other methods or techniques.

(ii) Colorado Ambient Air Quality Standards, 5 CCR 1001-14, Air Quality Regulation A, "Diesel-Powered Vehicle Emission Standards for Visible Pollutants":

a. No person will emit or cause to be emitted into the atmosphere from any diesel-powered vehicle any air contaminant, for a period greater than 10 consecutive seconds, which is of such a shade or density as to obscure an observer's vision to a degree in excess of 40% opacity, with the exception of subpart b below.

b. No person shall emit or cause to be emitted into the atmosphere from any naturally aspirated diesel-powered vehicle of over 8,500 lbs. gross vehicle weight rating operated above 7,000 feet (mean sea level), any air contaminant for a period greater than 10 consecutive seconds, which is of such a shade or density as to obscure an observer's vision to a degree in excess of 50% opacity.

c. Diesel-powered vehicles exceeding these requirements shall be exempt for a period of 10 minutes, if the emissions are a direct result of a cold engine start-up and provided the vehicle is in a stationary position.

d. This standard shall apply to motor vehicles intended, designed and manufactured primarily for use in carrying passengers or cargo on roads, streets and highways.

The following performance, design or action-specific State ARAR is applicable to this portion of the IRA and is more stringent than any applicable or relevant and appropriate Federal standard, requirement, criterion or limitation:

(iii) Colorado Noise Abatement Statute, C.R.S. Section 25-12-103:

a. Every activity to which this article is applicable shall be conducted in a manner so that any noise produced is not objectionable due to intermittence, beat frequency, or shrillness. Sound levels of noise radiating from a property line at a distance of 25 feet or more therefrom in excess of the db(A) established for the following time periods and zones shall constitute prime facie evidence that such noise is a public nuisance:

Zone	7:00 a.m. to next 7:00 p.m.	7:00 p.m. to next 7:00 a.m.
Residential	55 db(A)	50 db(A)
Commercial	60 db(A)	55 db(A)
Light Industrial	70 db(A)	65 db(A)
Industrial	80 db(A)	75 db(A)

b. In the hours between 7:00 a.m. and the next 7:00 p.m., the 10 db(A) for a period of not to exceed 15 minutes in any one-hour period.

c. Periodic, impulsive, or shrill noises shall be considered a public nuisance when such noises are at a sound level of five db(A) less than those listed in subsection (1) of this section.

d. Construction projects shall be subject to the maximum permissible noise levels specified for industrial zones for the period within which construction is to be completed pursuant to any applicable construction permit issued by proper authority or, if no time limitation is imposed, for a reasonable period of time for completion of the project.

e. For the purposes of this article, measurements with sound level meters shall be made when the wind velocity at the time and place of such measurement is not more than five miles per hour.

f. In all sound level measurements, consideration shall be given to the effect of the ambient noise level created by the encompassing noise of the environment from all sources at the time and place of such sound level measurement.

In substantive fulfillment of Colorado's Diesel-Powered Vehicle Emission Standards, no diesel motor vehicles associated with the construction shall be operated in a manner that will produce emissions in excess of those specified in these standards.

The noise levels pertinent for construction activity provided in C.R.S. Section 25-12-103 will be attained in accordance with this applicable Colorado Statute.

8.3.3.5 REMOVAL OF SOIL

There are no action-specific ARARs that pertain to the drilling or excavation of soil during the remediation of the sanitary sewer system.

Although not an ARAR, removal of soil from the areas where the system will be remediated will be performed in accordance with the procedures set forth in the Task No. 32 Technical Plan -- Sampling Waste Handling (November 1987) and EPA's July 12, 1985 memorandum entitled "EPA Region VIII procedure for handling of materials from drilling, trench excavation and decontamination during CERCLA RI/FS operations at the Rocky Mountain Arsenal." In general, any soils generated by drilling or excavation during the course of this IRA, either at surface or subsurface, will be returned to the location from which they originated (i.e., last out, first in). Any materials remaining after backfilling has been completed that are suspected of being contaminated based on field screening techniques, [2] will be properly stored, sampled, analyzed, and ultimately disposed of as CERCLA hazardous wastes,[3] as appropriate.

For materials determined to be hazardous waste, substantive RCRA provisions are applicable to their management. These substantive provisions include, but are not limited to: 40 C.F.R. Part 262 (Subpart C, Pre-Transport Requirements), 40 C.F.R. Part 263 (Transporter Standards), 40 C.F.R. Part 264 (Subpart I, Container Storage and Subpart L, Waste Piles). The specific substantive standards applied will be determined by the factual circumstances of the accumulation, storage or disposal techniques actually applied to any such material.

Remediation activities performed as part of this IRA may involve the removal and disposal of asbestos cement pipe from the sanitary sewers in South Plants. Several Federal regulations found in Volume 40, Code of Federal Regulations (CFR) Part 62 apply to this IRA and are listed below.

40 CFR Section 61.145 - Standard for Demolition and Renovation: Applicability;

40 CFR Section 61.147 - Standard for Demolition and Renovation: Procedures for Asbestos Emission Control;

40 CFR Section 61.152 - Standard for Waste Disposal for Manufacturing Demolition, Renovation, Spraying, and Fabricating Operations;

40 CFR Section 61.155 - Reporting; and

40 CFR Section 61.156 - Active Waste Disposal Sites.

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[2]The field screening techniques to be used to determine contamination are HNU, OVA, discoloration (visual) and odor. Readings or visual and odor inspection will be taken at least every five feet.

[3]It should be noted that the "land ban" provisions of RCRA Section 3004, 42 U.S.C. Section 6924, may be applicable to any such excavated soil that is identified as contaminated. Guidance concerning this matter is currently being developed by Headquarters, U.S. EPA.

In addition, 40 CFR Section 61.146 - Standard for Demolition and Renovation: Notification Requirements is relevant and appropriate, however, CERCLA Section 121e does not require that such procedural regulations be applicable. Equivalent information will be provided through the IRA process.

Colorado has been delegated authority by the Clean Air Act to administer a State NESHAPS Program. State regulations pertaining to the control of hazardous air pollutants are found at SCCR 1001-10, Part II, Regulations 8. Because the Federal regulations listed above are as stringent or more stringent than Colorado regulations, the Federal regulations will be used.

9.0 SCHEDULE

The Sanitary Sewer System IRA Draft Implementation Document will be completed 22 January 1990. The implementation and completion deadlines will be provided as milestones in the Implementation Document. If events occur which necessitate a schedule change or extension, the change will be incorporated in accordance with the discussion in Section XVIII of the RI/FS Process Document.

10.0 CONSISTENCY WITH THE FINAL REMEDIAL ACTION

The Sanitary Sewer IRA, consisting of in place abandonment of priority sections of the sanitary sewer system, will be conducted by the U.S. Army Program Manager's Office and will be consistent with any final remedial action selection for the sanitary sewer system.

11.0 REFERENCES

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